APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): December 14, 2007

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: St. Louis, Creve Coeur Creek Sanitary Trunk Sewer Relief Phase II, MVS-2007-631-001-SNR_s01, s12, w02, w04, w16, w17, w18, w20, w21, w22, w23, and w24

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Missouri County/parish/borough: St. Louis County City: St. Louis
Center coordinates of site (lat/long in degree decimal format): Lat. 38:40:14.2144° **N**, Long. -90:29:32.5420° **W**.
Universal Transverse Mercator: 15 North
Name of nearest waterbody: Creve Coeur Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Creve Coeur Lake
Name of watershed or Hydrologic Unit Code (HUC): Lower Missouri

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): August 15, 2007

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): [1]

☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
☒ Non-RPWs that flow directly or indirectly into TNWs
☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☐ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:
Non-wetland waters: 120 linear feet: 22 width (ft) and/or 0.06 acres.
Wetlands: 3.13 acres in total.

c. Limits (boundaries) of jurisdiction based on: **1987 Delineation Manual**
Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):[3]

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Some areas were reviewed within the alignment corridor that were mapped on the NWI map, but did not possess the three criteria required in the 1987 Manual.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: **Pick List**
Drainage area: 21 **square miles**
Average annual rainfall: 40 inches
Average annual snowfall: 9 inches

(ii) Physical Characteristics:
(a) Relationship with TNW:
☒ Tributary flows directly into TNW.
☐ Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **2-5** river miles from TNW.
Project waters are **1 (or less)** river miles from RPW.
Project waters are **1-2** aerial (straight) miles from TNW.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters are **1 (or less)** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: Creve Coeur Creek flows directly into Creve Coeur Lake, which has been identified as a TNW by the St. Louis District. Creve Coeur Lake is the largest natural lake within the state of Missouri. It is located within St. Louis County Creve Coeur Lake Park, and provides numerous recreational opportunities that involve boating throughout the year. The lake is utilized by local rowing teams, canoeists, and sailing enthusiasts. Creve Coeur Lake also hosts one of the largest annual boat racing events, the St. Louis Grand Prix boat race. This race is a nationally recognized event and draws thousands of spectators from all across the country. Because the lake is currently and historically tied to the Missouri River through a navigable section of Creve Coeur Creek (i.e., non-motorized recreational watercraft), it has been determined that the lake is susceptible (presently and historically) for use to transport interstate or foreign commerce. Therefore, the lake has been identified as a Traditional Navigable Water (TNW) by the St. Louis District.

With regards to stream channel s12, it was considered as an incised part of w23, as the channel started and stopped within the wetland

Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain:.

Tributary properties with respect to top of bank (estimate):
Average width: 25 feet
Average depth: 10 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):

☒ Silts	☒ Sands	☐ Concrete
☐ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The proposed sewerline replacement crosses Creve Coeur Creek once. Within that location, the creek exhibits typical bank erosion common to urbanized sections of streams. At the site of the crossing, the existing sewer pipe is only partly submerged, as the creek has endured downcutting and deepening over the years, partly exposing the sewer pipe
Presence of run/riffle/pool complexes. Explain: No riffle pool complexes were observed at the crossing.
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: Perennial Flow
Estimate average number of flow events in review area/year: **20 (or greater)**
Describe flow regime: Throughout this section of Creve Coeur Creek, the watercourse maintains water throughout the entire reach for most of the year. During dry periods, Creve Coeur Creek may be pooled in some locations.

Other information on duration and volume: .

Surface flow is: **Discrete and confined.** Characteristics:.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[5] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☒ the presence of litter and debris
☒ changes in the character of soil	☐ destruction of terrestrial vegetation
☒ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☒ leaf litter disturbed or washed away	☒ scour

[5]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

☒ sediment deposition
☐ water staining
☐ other (list):
☐ multiple observed or predicted flow events
☒ abrupt change in plant community

☐ Discontinuous OHWM.[6] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☒ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water was slightly turbid at this location, exhibiting signs of increased sedimentation

Identify specific pollutants, if known: Sediment

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): At the location of the crossing, there was minimal to no overstory vegetation present

☐ Wetland fringe. Characteristics:.

☐ Habitat for:
- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 3.13 acres

Wetland type. Explain: Seven of the nine identified wetlands contain emergent vegetative cover. Whereas, two of the nine wetlands have forested cover

Wetland quality. Explain: Generally, these wetlands receive pressure from the surrounding urbanized setting. Therefore, they were not considered "pristine" wetlands. However, forested wetlands are generally considered as high quality by the St. Louis District. All of the wetlands within this floodplain are considered as essential habitat for the local, urban wildlife. Wetlands within a heavily urbanized location, such as Chesterfield, Missouri provide cover, food, and a water supply for a variety of urban wildlife species

Project wetlands cross or serve as state boundaries. Explain:.

(b) General Flow Relationship with Non-TNW:

Flow is: **Perennial flow**. Explain:

Surface flow is**: Overland sheetflow**

Characteristics: Direct swales or channels were not observed connecting most of the identified wetlands. It was anticipated that overland sheetflow is one of the main sources of hydrology of these wetlands. However, w23 did contain a small channel that directed hydrology toward Creve Coeur Creek. The channel itself stopped just prior to joining Creve Coeur Creek

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: A total of nine wetlands were determined to be adjacent to Creve Coeur Creek (s01) based on their proximity to the perennial flow stream. Seven of the nine wetlands were located approximately 40 to 60 feet from Creve Coeur Creek. However, two wetlands (w17 and w18) spanned a distance measuring approximately 200-400 feet from Creve Coeur Creek. All wetlands were location within the 50- to 100- year floodplain. None of them had a natural or man-made obstruction present, presenting a physical barrier to surface flow exchange.

☒ Ecological connection. Explain: The identified wetlands provide an ecological benefit to the water quality within Creve Coeur Creek and on to Creve Coeur Lake and the Missouri River. Any species that lives wholly within, or partly utilizes the creek, benefits by having a healthy aquatic system .

☐ Separated by berm/barrier. Explain: .

[6]Ibid.

(d) Proximity (Relationship) to TNW
Project wetlands are **2-5** river miles from TNW.
Project waters are **2-5** aerial (straight) miles from TNW.
Flow is from: **Wetland to navigable waters.**
Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) Chemical Characteristics:
Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:
Identify specific pollutants, if known: No specific pollutants observed. However, the wetlands are located within a densely populated section of St. Louis County. Although there were no observable pollutants, potential souces of pollution within the urbanized setting include non-point souce discharges from fertilizers, pesticides, trace metals, organic compounds, and fecal material from domesitic animals

.

(iii) Biological Characteristics. Wetland supports (check all that apply):
☒ Riparian buffer. Characteristics (type, average width): Buffer along Creve Coeur Creek was variable. Conditions ranged between maintain lawns, forest conditions, and herbaceous cover types.
☒ Vegetation type/percent cover. Explain: Eight of the ten identified wetlands contain emergent vegetative cover. Whereas, two of the ten wetlands have forested cover.
☐ Habitat for:
☐ Federally Listed species. Explain findings: .
☐ Fish/spawn areas. Explain findings: .
☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)
All wetland(s) being considered in the cumulative analysis: **10**
Approximately (3.13) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)		Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
W02	NO	0.16 acres		
W04	NO	0.11 acres		
W16	NO	0.11 acres		
W17	NO	0.61 acres		
W18	NO	0.71 acres		
W20	NO	0.04 acres		
W21	NO	0.09 acres		
W22	NO	0.16 acres		
W23	NO	0.73 acres	(wetland includes a small channel identified as s12)	
W24	NO	0.41 acres		

Summarize overall biological, chemical and physical functions being performed: See Significant Nexus

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?

- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Creve Coeur Creek (s01) is a primary tributary to the Missouri River, which is a Traditional Navigable Water. Prior to Creve Coeur Creek flowing into the Missouri River, it flows through a natural, historical lake called Creve Coeur Lake, located approximately 2-5 miles downstream of the review area. All identified wetlands (w02, w04, w17, w18, w20, w21, w22, w23, and w24) are positioned within the 50- to 100- year floodplain of Creve Coeur Creek, and they all have the capability to individually and collectively influence the 1) physical, 2) chemical, and 3) biologic functions of Creve Coeur Creek, Creve Coeur Lake, and the Missouri River. The following paragraphs discuss the lake's relevance to the Significant Nexus evaluation, as well as display how the wetlands affect the physical, chemical, and biological conditions of the Creve Coeur Creek watershed.

Creve Coeur Lake is the largest natural lake within the state of Missouri. It is located within St. Louis County Creve Coeur Lake Park, and provides numerous recreational opportunities that involve boating throughout the year. The lake is utilized by local rowing teams, canoeists, and sailing enthusiasts. Creve Coeur Lake Park also hosts one of the largest annual boat racing events, the St. Louis Grand Prix boat race. This race is a nationally recognized event and draws thousands of spectators from all across the country, providing a forum for interstate commerce. Because the lake is currently and historically tied to the Missouri River through a navigable section of Creve Coeur Creek (i.e., non-motorized recreational watercraft) and currently provides opportunity for interstate commerce through the boat races, the lake has been identified as a Traditional Navigable Water (TNW) by the St. Louis District. In 2002, Creve Coeur Lake was removed from the Missouri state list of impaired waters (303d list) for high levels of Chlordane. Chlordane, a component of pesticides, was commonly applied to urban lawns until its banning in 1983. Despite Chlordane's banning, the impacts lingered in Creve Coeur Lake for several years because of the chemical's inability to break down or dissolve in water. Although, Creve Coeur Lake is no longer on the state 303d list for this specific pollutant, it does suggest that the lake's water quality has been compromised by activities that had occurred within the surrounding watershed….hence providing a historical foundation for a significant nexus between a watershed and its receiving waterbody.

As previously indicated, ten wetlands were observed to be located adjacent to Creve Coeur Creek, and determined to predominantly be influenced by its hydrology. Generally, most of the wetlands were located approximately 40 to 60 feet from the top of Creve Coeur Creek's bank. It is believed that the wetlands have more than a neglible affect on the physical conditions of Creve Coeur Creek as they intercept surface flow hydrology as it proceeds to the perennial flow stream. Generally, wetland plants, leaf litter, and other organic materials slow the flow of water en route to Creve Coeur Creek, causing water to be temporarily detained within wetlands. As water transport becomes temporarily slowed, opportunities for natural losses to the hydrologic cycle present itself (i.e., plant uptake, evapotransporation, evaporation, and groundwater infiltration). Therefore, water transport to Creve Coeur Creek is anticipated to be slowed through the interception of wetlands. As a result, the physical features of Creve Coeur Creek are likely to be positively affected through reducing the velocity of surface flow hydrology. As observed during the site visit, Creve Coeur Creek already exhibits signs of increased erosion from the pressure of urbanization. The conditions of Creve Coeur Creek are likely the response from a watershed that has already experienced significant losses of natural wetlands that were once present.

All of the identified wetlands within the Creve Coeur Creek floodplain have the potential to help ameliorate the affect of adjacent urbanization on the water quality of Creve Coeur Creek, Creve Coeur Lake, and the Missouri River. Wetlands have long been termed the "kidneys of the landscape", due to their capacity to assist with pollutant filtration and retention. Within the Creve Coeur Creek watershed, several opportunities exist for non-point source pollutants to enter the waterways (i.e., waste from domestic animals, pesticide, and fertilizer applications). Wetlands have been documented as having the capability of providing a long-term sink for these types of nutrients, primarily through their biogeochemical cycling (Walbridge and Lockaby 1994, Axt and Walbridge 1999). Specifically, wetlands that have developed within mineral soils, such as the ones observed, may even possess a greater capacity to assist with nutrient and pollutant retention due to a large source of binding cations (Richardson 1985).

Biologic Influence - In general, it has been documented that species richness and primary productivity are very high within wetlands that maintain open flow systems with regular pulsing hydroperiods. It is thought that flowing water can be a stimulus to plant productivity, likely caused by their ability to continually provide a renewable source of mineral input (Mitsch and Gosselink 2000). Flooding also

can temporarily induce anaerobic conditions, converting some micronutrients (i.e, Fe and Mn) into a form more readily available for plant uptake. Generally, greater plant productivity can result in a wider variety of other living organisms that utilize these systems. Greater production of plant biomass can typically convert to a more abundant food supply for local wildlife. Also, when water may become sparsely available, water is made available to animals through the moist hydrophytic vegetation or within shallow wetland pools. It has been previously recognized on this JD form that urban wildlife are under considerable pressure for having cover, food, and an available water supply. It is likely that many of the local wildlife species are highly dependent upon these wetlands for sustainability.

Axt, J.R., and M.R. Walbridge. 1999. Phosphate removal capacity of palustrine forested wetlands and ajacent uplands in Virginia. Soil Science Society of American Journal 63:1019-1031.

Mitsch, W.J. and J.G. Gosselink. 2000. Wetlands. John Wiley and Sons, Inc. New York, New York

Walbridge, M.R. and B.G. Lockaby. 1994. Effects of forest management on biogeochemical functions in southern forested wetlands. Wetlands 14:10-17..

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
- ☐ TNWs: linear feet width (ft), Or, acres.
- ☐ Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.
- ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: The on-site RPW (s01) is a named Creve Coeur Creek. It is mapped as a solid blue line on the USGS topographic map, indicating perennial flow. Upstream of the site, Creve Coeur Creek has an approximately 21 square mile watershed that supports its year round flow. The waterbody was also determined to be perennial based on the channel's observable flow characteristics, channel size, as well as prior site knowledge and experience
.
- ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☒ Tributary waters: **120** linear feet**22**width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: .

3. Non-RPWs[7] that flow directly or indirectly into TNWs.
- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  Identify type(s) of waters: **.**

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
- ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
  - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **.**
  - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

[7]See Footnote # 3.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: **3.13** acres.

6. **Wetlands abutting to non-RPWs that flow directly or indirectly into TNWs.**
   ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.**[8]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[9]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
   ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

[8] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[9] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  ☒ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps:.
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: Creve Coeur Quad.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: St. Louis County, Illinois.
☒ National wetlands inventory map(s). Cite name: Creve Coeur Quad.
☐ State/Local wetland inventory map(s):.
☒ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):.
  or ☐ Other (Name & Date):.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☒ Other information (please specify):Field review November 28, 2007.

B. ADDITIONAL COMMENTS TO SUPPORT JD:.